

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231 on	
April 15, 2002	
(Date of Deposit)	
Kenneth A. Gandy	
Name of Registered Representative	
<i>Kenneth A. Gandy</i>	
Signature	
April 15, 2002	
Date of Signature	

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

Loren J. Field, et al.

Filed December 18, 2001

Serial No.: 10/024,066

CARDIOMYOCYTES WITH ENHANCED
PROLIFERATIVE POTENTIAL, AND
METHODS FOR PREPARING AND USING SAME

) Before the Examiner

) Unknown

)

) Group Art Unit

) 1632

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

)

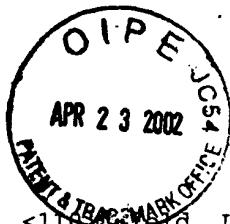
)

)

Respectfully Submitted,

By:

Kenneth A. Gandy
Kenneth A. Gandy, Reg. No. 38386
Woodard, Emhardt, Naughton,
Moriarty & McNett
Bank One Center/Tower
111 Monument Circle, Suite 3700
Indianapolis, Indiana 46204-5137
(317) 634-3456



SEQUENCE LISTING

<110> Said, Loren J.

Pasumarthi, Kishore Babu S.

<120> CARDIOMYOCYTES WITH ENHANCED PROLIFERATIVE POTENTIAL,
AND METHODS FOR PREPARING AND USING SAME

<130> 7037-450

<140> 10/024,066

<141> 2001-12-18

<150> 60/139,942

<151> 1999-06-18

<150> PCT/US00/16827

<151> 2000-06-19

<160> 8

<170> PatentIn Ver. 2.1

<210> 1

<211> 876

<212> DNA

<213> *Mus musculus*

<220>

<221> CDS

<222> (4)...(870)

<400> 1

gct atg gag ctg ctg tgc tgc gag gtg gac ccg gtc cgc agg gcc gtg 48

Met Glu Leu Leu Cys Cys Glu Val Asp Pro Val Arg Arg Ala Val

1

5

10

15

ccg gac cgc aac ctg ctg gaa gac cgc gtt ctg cag aac ctg ttg acc 96

Pro Asp Arg Asn Leu Leu Glu Asp Arg Val Leu Gln Asn Leu Leu Thr

20

25

30

atc gag gag cgc tac ctc ccg cag tgt tcc tat ttc aag tgc gtg cag 144

Ile Glu Glu Arg Tyr Leu Pro Gln Cys Ser Tyr Phe Lys Cys Val Gln

35

40

45

aag gac atc caa ccg tac atg cgc agg atg gtg gcc acc tgg atg cta 192

Lys Asp Ile Gln Pro Tyr Met Arg Arg Met Val Ala Thr Trp Met Leu

50

55

60

gag gtc tgt gag gaa caa aag tgt gaa gaa gag gtc ttt cct ctg gcc	240		
Glu Val Cys Glu Glu Gln Lys Cys Glu Glu Val Phe Pro Leu Ala			
65	70	75	
atg aat tac ctg gac cgt ttc ttg gct gga gtc ccg act cct aag acc	288		
Met Asn Tyr Leu Asp Arg Phe Leu Ala Gly Val Pro Thr Pro Lys Thr			
80	85	90	95
cat ctt cag ctc ctg ggt gca gtg tgc atg ttc cta gct tcc aag ctg	336		
His Leu Gln Leu Leu Gly Ala Val Cys Met Phe Leu Ala Ser Lys Leu			
100	105	110	
aaa gag acc atc ccg ctg act gcg gaa aag ctg tgc att tac acc gac	384		
Lys Glu Thr Ile Pro Leu Thr Ala Glu Lys Leu Cys Ile Tyr Thr Asp			
115	120	125	
aac tct gtg aag ccc cag gag ctg ctg gag tgg gaa ctg gta gtg ttg	432		
Asn Ser Val Lys Pro Gln Glu Leu Leu Glu Trp Glu Leu Val Val Leu			
130	135	140	
ggt aag ctg aag tgg aac ctg gcc gca gtc acc cct cac gac ttc att	480		
Gly Lys Leu Lys Trp Asn Leu Ala Ala Val Thr Pro His Asp Phe Ile			
145	150	155	
gag cac atc ctt cgc aag ctg ccc cag caa aag gag aag ctg tcc ctg	528		
Glu His Ile Leu Arg Lys Leu Pro Gln Gln Lys Glu Lys Leu Ser Leu			
160	165	170	175
atc cgc aag cat gcg cag acc ttc atc gct ctg tgc gct acc gac ttc	576		
Ile Arg Lys His Ala Gln Thr Phe Ile Ala Leu Cys Ala Thr Asp Phe			
180	185	190	
aag ttt gcc atg tac ccg cca tcg atg att gca act gga agc gtg gga	624		
Lys Phe Ala Met Tyr Pro Pro Ser Met Ile Ala Thr Gly Ser Val Gly			
195	200	205	
gca gcc atc tgt ggg ctt cag cag gat gat gaa gtg aac aca ctc acg	672		
Ala Ala Ile Cys Gly Leu Gln Gln Asp Asp Glu Val Asn Thr Leu Thr			
210	215	220	
tgt gat gcc ctg act gag ctg ctg gcc aag atc acc cac act gat gtg	720		
Cys Asp Ala Leu Thr Glu Leu Leu Ala Lys Ile Thr His Thr Asp Val			
225	230	235	
gat tgt ctc aaa gcc tgc cag gag caa atc gaa gct ctg ctg aac	768		
Asp Cys Leu Lys Ala Cys Gln Glu Gln Ile Glu Ala Leu Leu Asn			
240	245	250	255

agc ctg cag cag ttc cgt caa gag cag cat aac gcc gga tcc aag tct 816
Ser Leu Gln Gln Phe Arg Gln Glu Gln His Asn Ala Gly Ser Lys Ser
260 265 270

gtg gaa gat ccg gac caa gcc acc acc cct aca gac gtg cggt gat gtt 864
Val Glu Asp Pro Asp Gln Ala Thr Thr Pro Thr Asp Val Arg Asp Val
275 280 285

gac ctg tgagga 876
Asp Leu

<210> 2
<211> 289
<212> PRT
<213> Mus musculus

<400> 2
Met Glu Leu Leu Cys Cys Glu Val Asp Pro Val Arg Arg Ala Val Pro
1 5 10 15

Asp Arg Asn Leu Leu Glu Asp Arg Val Leu Gln Asn Leu Leu Thr Ile
20 25 30

Glu Glu Arg Tyr Leu Pro Gln Cys Ser Tyr Phe Lys Cys Val Gln Lys
35 40 45

Asp Ile Gln Pro Tyr Met Arg Arg Met Val Ala Thr Trp Met Leu Glu
50 55 60

Val Cys Glu Glu Gln Lys Cys Glu Glu Val Phe Pro Leu Ala Met
65 70 75 80

Asn Tyr Leu Asp Arg Phe Leu Ala Gly Val Pro Thr Pro Lys Thr His
85 90 95

Leu Gln Leu Leu Gly Ala Val Cys Met Phe Leu Ala Ser Lys Leu Lys
100 105 110

Glu Thr Ile Pro Leu Thr Ala Glu Lys Leu Cys Ile Tyr Thr Asp Asn
115 120 125

Ser Val Lys Pro Gln Glu Leu Leu Glu Trp Glu Leu Val Val Leu Gly
130 135 140

Lys Leu Lys Trp Asn Leu Ala Ala Val Thr Pro His Asp Phe Ile Glu
145 150 155 160

His Ile Leu Arg Lys Leu Pro Gln Gln Lys Glu Lys Leu Ser Leu Ile
165 170 175

Arg Lys His Ala Gln Thr Phe Ile Ala Leu Cys Ala Thr Asp Phe Lys
180 185 190

Phe Ala Met Tyr Pro Pro Ser Met Ile Ala Thr Gly Ser Val Gly Ala
195 200 205

Ala Ile Cys Gly Leu Gln Gln Asp Asp Glu Val Asn Thr Leu Thr Cys
210 215 220

Asp Ala Leu Thr Glu Leu Leu Ala Lys Ile Thr His Thr Asp Val Asp
225 230 235 240

Cys Leu Lys Ala Cys Gln Glu Gln Ile Glu Ala Leu Leu Leu Asn Ser
245 250 255

Leu Gln Gln Phe Arg Gln Glu Gln His Asn Ala Gly Ser Lys Ser Val
260 265 270

Glu Asp Pro Asp Gln Ala Thr Thr Pro Thr Asp Val Arg Asp Val Asp
275 280 285

Leu

<210> 3
<211> 873
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (4)..(870)

<400> 3
gct atg gag ctg ctg tgc cac gag gtg gac ccg gtc cgc agg gcc gtg 48
Met Glu Leu Leu Cys His Glu Val Asp Pro Val Arg Arg Ala Val
1 5 10 15

cgg gac cgc aac ctg ctc cga gac gac cgc gtc ctg cag aac ctg ctc 96
Arg Asp Arg Asn Leu Leu Arg Asp Asp Arg Val Leu Gln Asn Leu Leu
20 25 30

acc atc gag gag cgc tac ctt ccg cag tgc tcc tac ttc aag tgc gtg	35	40	45	144
Thr Ile Glu Glu Arg Tyr Leu Pro Gln Cys Ser Tyr Phe Lys Cys Val				
cag aag gac atc caa ccc tac atg cgc aga atg gtg gcc acc tgg atg	50	55	60	192
Gln Lys Asp Ile Gln Pro Tyr Met Arg Arg Met Val Ala Thr Trp Met				
ctg gag gtc tgt gag gaa cag aag tgc gaa gaa gag gtc ttc cct ctg	65	70	75	240
Leu Glu Val Cys Glu Glu Gln Lys Cys Glu Glu Val Phe Pro Leu				
gcc atg aat tac ctg gac cgt ttc ttg gct ggg gtc ccg act ccg aag	80	85	90	288
Ala Met Asn Tyr Leu Asp Arg Phe Leu Ala Gly Val Pro Thr Pro Lys				
tcc cat ctg caa ctc ctg ggt gct gtc atg ttc ctg gcc tcc aaa	100	105	110	336
Ser His Leu Gln Leu Leu Gly Ala Val Cys Met Phe Leu Ala Ser Lys				
ctc aaa gag acc agc ccg ctg acc gcg gag aag ctg tgc att tac acc	115	120	125	384
Leu Lys Glu Thr Ser Pro Leu Thr Ala Glu Lys Leu Cys Ile Tyr Thr				
gac aac tcc atc aag cct cag gag ctg ctg gag tgg gaa ctg gtg gtg	130	135	140	432
Asp Asn Ser Ile Lys Pro Gln Glu Leu Leu Glu Trp Glu Leu Val Val				
ctg ggg aag ttg aag tgg aac ctg gca gct gtc act cct cat gac ttc	145	150	155	480
Leu Gly Lys Leu Lys Trp Asn Leu Ala Ala Val Thr Pro His Asp Phe				
att gag cac atc ttg cgc aag ctg ccc cag cag cgg gag aag ctg tct	160	165	170	528
Ile Glu His Ile Leu Arg Lys Leu Pro Gln Gln Arg Glu Lys Leu Ser				
ctg atc cgc aag cat gct cag acc ttc att gct ctg tgt gcc acc gac	180	185	190	576
Leu Ile Arg Lys His Ala Gln Thr Phe Ile Ala Leu Cys Ala Thr Asp				
ttt aag ttt gcc atg tac cca ccg tcg atg atc gca act gga agt gtg	195	200	205	624
Phe Lys Phe Ala Met Tyr Pro Pro Ser Met Ile Ala Thr Gly Ser Val				
gga gca gcc atc tgt ggg ctc cag cag gat gag gaa gtg agc tcg ctc	210	215	220	672
Gly Ala Ala Ile Cys Gly Leu Gln Gln Asp Glu Glu Val Ser Ser Leu				

act tgt gat gcc ctg act gag ctg ctg gct aag atc acc aac aca gac	720		
Thr Cys Asp Ala Leu Thr Glu Leu Leu Ala Lys Ile Thr Asn Thr Asp			
225	230	235	
gtg gat tgt ctc aaa gct tgc cag gag cag att gag gcg gtg ctc ctc	768		
Val Asp Cys Leu Lys Ala Cys Gln Glu Gln Ile Glu Ala Val Leu Leu			
240	245	250	255
aat agc ctg cag cag tac cgt cag gac caa cgt gac gga tcc aag tcg	816		
Asn Ser Leu Gln Gln Tyr Arg Gln Asp Gln Arg Asp Gly Ser Lys Ser			
260	265	270	
gag gat gaa ctg gac caa gcc agc acc cct aca gac gtg cgg gat atc	864		
Glu Asp Glu Leu Asp Gln Ala Ser Thr Pro Thr Asp Val Arg Asp Ile			
275	280	285	
gac ctg tga	873		
Asp Leu			

<210> 4
 <211> 289
 <212> PRT
 <213> Homo sapiens

<400> 4			
Met Glu Leu Leu Cys His Glu Val Asp Pro Val Arg Arg Ala Val Arg			
1	5	10	15
Asp Arg Asn Leu Leu Arg Asp Asp Arg Val Leu Gln Asn Leu Leu Thr			
20	25	30	
Ile Glu Glu Arg Tyr Leu Pro Gln Cys Ser Tyr Phe Lys Cys Val Gln			
35	40	45	
Lys Asp Ile Gln Pro Tyr Met Arg Arg Met Val Ala Thr Trp Met Leu			
50	55	60	
Glu Val Cys Glu Glu Gln Lys Cys Glu Glu Val Phe Pro Leu Ala			
65	70	75	80
Met Asn Tyr Leu Asp Arg Phe Leu Ala Gly Val Pro Thr Pro Lys Ser			
85	90	95	
His Leu Gln Leu Leu Gly Ala Val Cys Met Phe Leu Ala Ser Lys Leu			
100	105	110	
Lys Glu Thr Ser Pro Leu Thr Ala Glu Lys Leu Cys Ile Tyr Thr Asp			

115	120	125
Asn Ser Ile Lys Pro Gln Glu Leu Leu Glu Trp Glu Leu Val Val Leu		
130	135	140
Gly Lys Leu Lys Trp Asn Leu Ala Ala Val Thr Pro His Asp Phe Ile		
145	150	155
160		
Glu His Ile Leu Arg Lys Leu Pro Gln Gln Arg Glu Lys Leu Ser Leu		
165	170	175
Ile Arg Lys His Ala Gln Thr Phe Ile Ala Leu Cys Ala Thr Asp Phe		
180	185	190
Lys Phe Ala Met Tyr Pro Pro Ser Met Ile Ala Thr Gly Ser Val Gly		
195	200	205
Ala Ala Ile Cys Gly Leu Gln Gln Asp Glu Glu Val Ser Ser Leu Thr		
210	215	220
Cys Asp Ala Leu Thr Glu Leu Leu Ala Lys Ile Thr Asn Thr Asp Val		
225	230	235
240		
Asp Cys Leu Lys Ala Cys Gln Glu Gln Ile Glu Ala Val Leu Leu Asn		
245	250	255
Ser Leu Gln Gln Tyr Arg Gln Asp Gln Arg Asp Gly Ser Lys Ser Glu		
260	265	270
Asp Glu Leu Asp Gln Ala Ser Thr Pro Thr Asp Val Arg Asp Ile Asp		
275	280	285
Leu		

<210> 5
 <211> 5443
 <212> DNA
 <213> Mus musculus

<400> 5
 ggatcctgca aggtcacaca agggtctcca cccaccaggc gccctagtct caatttcagt 60
 ttccatgcct tggctcaca atgctggcct ccccagagct aatttggact ttgttttat 120
 ttcaaaaggc cctgaatgag gagtagatct tgtgctaccc agctctaagg gtgccgtga 180
 agccctcaga cctggagcct ttgcaacagc cctttaggtg gaagcagaat aaagcaattt 240
 tccttaaagc caaaatcctg cctctagact cttctctct gacctcggtc cctggctct 300

agggtgggaa ggtggggctt ggaagaagaa ggtggggaaag tggcaaaagc cgatccctag 360
ggccctgtga agttcggagc cttccctgtta cagcaactggc tcatacatcc tcctccagcc 420
aaacatagca agaagtgata cctcccttgc gacttccccca gccccagtagc ctgtcagggtt 480
gaaacaggat ttagagaagc ctctgaactc acctgaactc tgaagctcat ccaccaagca 540
agcacctagg tgccactgct agtttagtatac ctacgctgat aatatgcaga gctggccac 600
agaagtccctg gggtaggtt gactgaccagt gactttcag tcggcaaaagg tatgacccccc 660
tcagcagatg tagtaatgtc cccttagatc ccatcccagg caggtctcta agaggacatg 720
ggatgagaga ttagtcatg tggcattcca aacacagcta tccacagtg ccctggccccc 780
ttccacttag ccaggaggac agtaaccttgc gcctatctt cttccctccccc atccctccag 840
gacacacccc ctggctgca gtattcattt ctcccttac gtccttcgt tgacttccat 900
ttgcaaggct tttgacacttgc gcaagctgctg gaagatagag tttggcccta ggtgtggcaa 960
gccatctcaa gagaaagcag acaacagggg gaccagattt tggaggatc aggaactaaa 1020
tcactggcgg gcctgggggt agaaaaaaaaga gtgagtgagt ccgctccagc taagccaagc 1080
tagtccccga gatactctgc cacagctggg ctgctgggg tagctttagg aatgtggtc 1140
tggaaagacaa tgggatttggaa agacatctctt ttgagtcctt cctcaacccc acctacagac 1200
acactcgtgt gtggccagac tcctgttcaa cagccctctg tggctgacc actgagctag 1260
gcaaccagag catggggccct gtgctgagga tgaagagttt gttaccaata gcaaaaaacag 1320
caggggaggg agaacagaga acgaaataag gaaggaagaa gaaaggcca gtcaatcaga 1380
tgcagtcaga agagatgggaa agccaaacaca cagcttgagc agaggaaaca gaaaaggag 1440
agattctggg cataaggagg ccacagaaag aagagccag gcccccaag ttcctctt 1500
ataccctcat cccgtctccc aattaagccc actcttcttc cttagatcaga cctgagctgc 1560
agcgaagaga cccgttaggaa ggatcacact ggttgaagga gatgtgttggaa gaagtccagg 1620
gcaacctaag agccagagcc taaaagagca agagataaag gtgcttcaaa ggtggccagg 1680
ctgtgcacac agagggtcga ggactgggtt tagaggctca agataaggat gatgtcaga 1740
atgggcgggg ggggggattt tgggggggggg agagagaagg tgagaaggag cctggaaacag 1800
agaatctggaa agcgttggaa acgataccat aaagggaaaga acccaggcta cctttagatg 1860
taaatcatga aagacagggaa gaagggaaagc tggagagagt agaaggaccc cggggcaaga 1920
catggaaagca aggacaagcc agtttggcg ctcctgttca ttagccctgttgaagggcagag 1980
ccctggatg agcaccagaa cagcagaggc tagggtaat gtcgagacag ggaacagaag 2040
gtagacacag gaacagacag agacggggaa gcccaggtaac aaagggatgg tccttctcac 2100
ctgtggccag agcgtccatc tggctccaca tactcttagaa tggttcatcag actgcaggc 2160
tggcttggaa ggcagctgaa aagagtatgt gagagccagg ggagacaagg gggcttagga 2220
aaggaagaag agggcaaaacc agccacacca agagggcaga gcccagaact gagttactc 2280
cttccttgcgtt gcatcttcca taggaggcag tggaaactct gtgaccacca tccccatga 2340
gcccccaacta cccatccaa gttggcctg agtggcattt tagttccctt gaggacagag 2400
cctggcctt gtctcttggaa cctgaccctt gctgaccctt tggttctcagt accttatcat 2460
gccctcaaga gcttggaaac caggcagtga catattaggc catgggttccaa ccctggagct 2520
tgcacacagg agcctcaagt gaccccttggcag gacacagctg cagacagggtt gccttatcc 2580
ccaaagagca accatttggc ataggtggct gcaaatggaa atgcaaggtt gaatcaggc 2640
ccttcaagaa tactgcattc aagacctaag accccttggag agaggggtat gtccttgc 2700
ccacccacca taaggggagttt gaaactatcctt agggggctgg cggcccttggg gagacaccac 2760
attactgaga gtgctgagcc cagaaaaactt gaccggccctg tggttcttgc acctccacac 2820
tcttagagctt tatttggagg tgacagttaga taggggtggaa gctggtagca gggaggtt 2880
tcctgggtgtt gagggtgttag gggaaagccaa gaggcaggggaa gtctggcttt gtcttgc 2940
cacaatgtctt acttagttt aacaggcatg acctgtttttt gacccaaacat ctacgaccc 3000
tgaaaagaca gcagccctgg aggacagggggg ttgttcttgc gccttgggtt cttgttgggtt 3060
ccacaaagga gggcatgagttt gtgagttttttt gggcccttggg gctttttttt gggcacttgc 3120
ggaagggggtt agtcttgcaga gccccttatcc atggaaatctg gggcccttggg ccaacttgggtt 3180

taaatctctg ggcgtgccag gcattcaaag cagcacctgc atcctctggc agcctggga 3240
 ggccgaaggg agcaaccccc cacttatacc ctttctccct cagccccagg attaacacct 3300
 ctggccttcc cccttcccac ctcccacatcag gagtggaggg ttgcagaggg agggtaaaaa 3360
 cctacatgtc caaacatcat ggtcacatc atatggatca gtatgtgt tag aggcaagaaa 3420
 gaaaaatctgc aggcttaact gggtaatgt gttaaagtctg tgtgcacatgtg tgtgtgtctg 3480
 actgaaaacg ggcacatggctg tgcacgtt cagttctgtg cgtgaggta ccagactgca 3540
 ggtttgtgtg taaattgccc aaggcaaaatgt gggtgaatcc cttccatgtt ttaaagagat 3600
 tggatgtatgg cctgcacatc aaggaccatg gaaaatagaa tggacactt atatgtgtct 3660
 ctaagctaag gtagcaaggt ctttggagga cacctgtcta gagatgtggg caacagagac 3720
 tacagacagt atctgtacag agtaaggaga gagaggaggg ggtgtagaat tctcttacta 3780
 tcaaaggaa actgagtcgt gcacactgcaa agtggatgtc ctccctagac atcatgactt 3840
 tgtctctggg gagccagcac tgtggaaactt caggtctgag agagtaggag gctccctca 3900
 gcctgaagct atgcagatag ccagggttga aaggggaaag ggagagcctg ggatgggagc 3960
 ttgtgtgtt gaggcaggaa acagatatta agccttggaaag agaaggtgac ctttacccag 4020
 ttgttcaact cacccttcag attaaaaata actgaggtaa gggcttgggt aggggaggtg 4080
 gtgtgagacg ctccctgtctc tcctctatct gcccacatcggc ctttggggaa ggaggaatgt 4140
 gccaaggac taaaaaaagg ccatggagcc agagggcga gggcaacaga ctttcatgg 4200
 gcaaaccctt gggccctgtc gtcccttgc cacccatcaga gccaaggat caaaggagga 4260
 ggagccagga caggaggaa gtggggagggaa gggtcccagc agaggactcc aaatttaggc 4320
 acaggcata tggatggaa tataaaggaa ctggagcact gagagctgtc agagatttct 4380
 ccaacccagg taagagggag tttcgggtgg gggcttca cccacaccag acctctcccc 4440
 acctagaagg aaactgcctt tccttggaaat ggggttcagg ccgtcagag atctgacagg 4500
 gtggccttcc accagccttgg gaagttctca gtggcaggag gtttccacaa gaaacactgg 4560
 atgcccccttc ctttacgtc tccttctccat cttcccttgc gggatgtcc tccccgtctt 4620
 ggtttatctt ggcttctgt ctccatcagaat atttcccttgc tgctgtccac tccatcttc 4680
 tctactgtct ccgtgccttgc ctttgccttc ttgcgtgtcc ttcccttcca cccatttctc 4740
 acttcacctt ttcccttccat ctcatttgc ttcatttcttc cttcccttccat tcccttccat 4800
 ctcccttccat tccttccatc ctttctccat tccttccatc cttcccttccat tcccttccat 4860
 ctcccttccat gtgtcagatg gctgagaatc acacccatggg ttcccacccat tatgtaaaca 4920
 atcttccatg gagccacatc ttcatgtcgt ctgggtgtc tcttacccatc ctcacccatc 4980
 ggcttgcctt gttccatcctt ggtcaggatc tcttagattgg tctcccaatc tctgtactc 5040
 ctcccttgc ctgttccatc ctctgtccat ctgcgtccat gtgggtgcctc gttccatc 5100
 tggccatc ttttccat tctctgaaaa gtttccatc ttttccatc ttttccatc ttttccatc 5160
 acaggcatac acgatttctcc cggaaatgtcag gtttccatc ctcttccatc ctgttccatc 5220
 gcccggact ctttccatc ctcaggcacc ctttccatc atagacccatc gacagagaag 5280
 caggcactt acatggatc ctgggtggag agccataggc tacgggttac aagaggcagg 5340
 gaagtgggtt gtttccatc acatggatc ctgggtggag agccataggc tacgggttac aagaggcagg 5400
 cagacagatc ctttccatc ctttccatc ctttccatc ctttccatc ctttccatc ctttccatc 5443

<210> 6
 <211> 134
 <212> DNA
 <213> Simian virus 40

<400> 6
 gtggatgggc agcctatgtat tggaaatgtcc tctcaagtag agggaggtag ggtttatgtt 60
 gacacagagg agcttcttgg ggttccatc acatggatc acatggatc gtttccatc 120

accacaacta gaat

134

<210> 7
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 7
gctatggagc tgcttgctg cgaggtggac

30

<210> 8
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 8
tcctcacagg tcaacatccc gcacgtctgt

30